high_order_integrals.py

List of calculated quantities:

Displacement thickness

$$\delta^* = \int_0^\infty rac{\langle u
angle}{U_w} dy$$

Momentum thickness

$$heta = \int_0^\infty rac{\langle u
angle}{U_w}igg(1-rac{\langle u
angle}{U_w}igg)dy$$

Reynolds number based on displacement thickness

$$Re_{\delta^*} = rac{U_w \delta^*}{
u}$$

Reynolds number based on momentum thickness

$$Re_{ heta} = rac{U_w heta}{
u}$$